

HISTORIC AMERICAN ENGINEERING RECORD

MASTER PROJECT RECORD

HAER OH-10

Center Street Bridge, 1900-1901 Rehabilitated 1946-47
.6 miles southwest of Public Square
Cleveland
Cuyahoga County
Ohio

NOTE: All photographs were taken by John T. "Jet" Lowe during the
the summer of 1978.

- OH-10-1 View of Center Street Swing Bridge looking north. the old
Superior Viaduct can be seen in the background.
- OH-10-2 General view of bridge looking northeast. The photo is
framed by the superstructure of the Detroit Superior High
Level Bridge(1914-17). The open stringer construction
of the lower deck of the steel arch is clearly illustrated.
- OH-10-3/10 This series of photographs (3 through 9) illustrates the
operation of the swing bridge. In #3 the bridge is in its
closed position. #s 4,5,&6 the boat whistles and requests
passage. the bridge is closed to traffice. The bridge
operator, stationed in the center of the tenders house at the
center of the truss releases the pneumatic jack. The rollers
beneath the deck swing upward and the electric-powered turntable
swings the bobtail drawn in the direction of the oncoming vessel.
In #7 a tugboat enters the channel. In #8 a much-lightened ore
carrier which has delivered its cargo to the steel mills up-
river(note the high water mark), makes its way down-river towards
Lake Erie. Such boats are too large to turn around on the narrow
Cuyahoga, so they go out backwards, pulled by a tug. In #9 the
the ore-carrier clears the channel. In #10 As soon as the boat
clears the bridge, the bridge tender begins to close it. The
bridge is opened in the direction of an oncoming vessel so that
it can be closed even as the boat is leaving the channel; thus
surface traffic on Center Street suffers the least possible
interruption.

(continued)

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- OH-10-11 View showing detail of truss tower. The vertical, or compression, members of the bridge are formed from two channel beams riveted together with lacing bars. The diagonal or tension members, are die-forged eyebars.
- OH-10-12 Pneumatic jack and rollers. To lift the ends of the draw span to its proper closed position, the Center Street Bridge features a pair of rollers located under the deck of each end of the draw span. The rollers are moved downward by the pistons of a pneumatic jack to support the bridge when closed. To open the draw, the rollers are released and swung upward toward the center of the deck.
- OH-10-13 View of Truss tower and pivot pier looking east. When the draw is open, the two arms of the truss act as cantilevers supported by the truss tower. A counterweight in the shorter arm of the bridge keeps the span in proper balance.
- OH-10-14 General view of pivot pier and turntable. The octagonal pier, 36 feet in diameter, is capped by a circular girder and a turntable that swings the bridge. the bridge was originally powered by two 25 h.p. motors coupled to two drive shafts. the turntable in the photograph is a replacement fabricated by the Allis-Chalmers Company in the 1950s.

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HAER
OHIO
18-CLEV,
29-

ADDENDUM TO
CENTER STREET SWING BRIDGE
Southwest of Public Square
Cleveland
Cuyahoga County
Ohio

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INDEX TO COLOR TRANSPARENCIES

All color xerographic copies were made from a duplicate color transparency.

Note: Photographer, Jet Lowe

OH-I0-23 (CT) OBLIQUE VIEW